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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,197	06/25/2004	Sam Shiaw-Shiang Jiang	5413-0183PUSI	4196
64044 7590 09/24/2007 BIRCH, STEWART, KOLASCH & BIRCH, LLP 8110 GATEHOUSE ROAD SUITE 100 EAST FALLS CHURCH, VA 22315			EXAMINER GOETZE, SIMON A	
			ART UNIT 2617	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/710,197

Applicant(s)

JIANG, SAM SHIAW-SHIANG

Examiner

Simon A. Goetze

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. **Claims 1-5, 14-26 and 35-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Foore et al. (US Patent Application Publication (2004/0179497)** in view of **Luijten et al. (US Patent 7,145,873)**.

Consider **claims 1 and 22**, Foore et al. discloses a method for controlling wireless communication between a first station and a second station, the first station having a buffer memory, a first memory block of the buffer memory being allocated to a first radio bearer for storing data units requested to be transmitted to the second station through the first radio bearer (*Figures 1 and 3*), the method comprising the steps of:

establishing a second radio bearer between the first station and the second station (*based upon need, more than one bearer is set up between the first and second station – Page 4, Paragraphs 0042, 0044-0045 and 0048; Page 5, Paragraph 0054*);

reconfiguring the first memory block, and allocating a second memory block of the buffer memory to the second radio bearer for storing data units requested to be transmitted to the second station through the second radio bearer (*the buffer is reconfigured and the data sent to the respective buffer can be sent over the bearers which are assigned to the buffer – Page 5, Paragraphs 0051-0052 and 0059*).

However, while Foore et al. discloses the buffers and their corresponding bearers, they fail to disclose blocking the first station from passing a first data unit to the first memory block if the first memory block is unable to accommodate the first data unit, wherein the first data unit is requested to be transmitted to the second station through the first radio bearer.

In related prior art, Luijten et al. discloses blocking the first station from passing a first data unit to the first memory block if the first memory block is unable to accommodate the first data unit, wherein the first data unit is requested to be transmitted to the second station through the first radio bearer (*Abstract; Column 9, Lines 65-67 and Column 10, Lines 1-28*).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Luijten et al. with those of Foore et al. so that data is not unnecessarily lost due to scheduling to a queue which can't accommodate more data.

Consider **claims 2 and 23**, as applied to claims 1 and 22 above, Foore et al. as modified by Luijten et al. discloses blocking the first station from passing a second data unit to the second memory block if the second memory block is unable to accommodate the second data unit,

wherein the second data unit is requested to be transmitted to the second station through the second radio bearer (*Luijten et al. – Column 9, Lines 65-67 and Column 10, Lines 1-28*).

Consider **claims 3 and 24**, as applied to claims 2 and 23 above, Foore et al. as modified by Luijten et al. discloses that the first station stops processing the first data unit if the first memory block is full, and the first station stops processing the second data unit if the second memory block is full (*read as no data is sent for the stations to process*).

Consider **claims 4 and 25**, as applied to claims 1 and 22 above, Foore et al. as modified by Luijten et al. discloses reducing the first memory block within the buffer memory for reconfiguring the first memory block (*read as the first station has a limited amount of memory and when the buffer is reconfigured the first memory block, i.e. memory capability, is reduced – Page 5, Paragraphs 0051-0052 and 0059*).

Consider **claims 5 and 26**, as applied to claims 1 and 22 above, Foore et al. as modified by Luijten et al. discloses keeping data units stored within the buffer memory when the second memory block is allocated (*Page 5, Paragraphs 0051-0052 and 0059*).

Consider **claims 14 and 35**, Foore et al. discloses a method for controlling wireless communication between a first station and a second station, the first station having a buffer memory, a first transmission window being configured within the buffer memory for accommodating data units allowed to be transmitted to the second station through a first radio bearer, wherein data units not accommodated in the first transmission window are not allowed to transmit through the first radio bearer before at least one PDU of lowest sequence number accommodated in the first transmission window is positively acknowledged to be received (*Figures 1 and 3*), the method comprising the steps of:

establishing a second radio bearer between the first station and the second station (*based upon need, more than one bearer is set up between the first and second station – Page 4, Paragraphs 0042, 0044-0045 and 0048; Page 5, Paragraph 0054*);

reconfiguring the first transmission window, and configuring a second transmission window within the buffer memory for accommodating data units allowed to be transmitted to the second station through the second radio bearer (*the buffer is reconfigured and the data sent to the respective buffer can be sent over the bearers which are assigned to the buffer – Page 5, Paragraphs 0051-0052 and 0059*).

However, while Foore et al. discloses the buffers and their corresponding bearers, they fail to disclose that if the buffer memory excluding the second transmission window is unable to accommodate a first new data unit requested to be transmitted to the second station through the first radio bearer, blocking the first station from passing the first new data unit to the buffer memory.

In related prior art, Luijten et al. discloses that if the buffer memory excluding the second transmission window is unable to accommodate a first new data unit requested to be transmitted to the second station through the first radio bearer, blocking the first station from passing the first new data unit to the buffer memory (*Abstract; Column 9, Lines 65-67 and Column 10, Lines 1-28*).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Luijten et al. with those of Foore et al. so that data is not unnecessarily lost due to scheduling to a queue which can't accommodate more data.

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Consider **claims 15 and 36**, as applied to claims 14 and 35 above, Foore et al. as modified by Luijten et al. discloses that when the buffer memory excluding the second transmission window is capable of accommodating the first new data unit, storing the first new data unit into the buffer memory (*Luijten et al. – Column 9, Lines 65-67 and Column 10, Lines 1-28*).

Consider **claims 16 and 37**, as applied to claims 15 and 26 above, Foore et al. as modified by Luijten et al. discloses that if the first transmission window is capable of accommodating the first new data unit, storing the first new data unit into the first transmission window (*read as when the buffer is not blocked, new data can be queued for transmission*).

Consider **claims 17 and 38**, as applied to claims 14 and 35 above, Foore et al. as modified by Luijten et al. discloses that if the buffer memory excluding the first transmission window is unable to accommodate a second new data unit requested to be transmitted to the second station through the second radio bearer, blocking the first station from passing the second new data unit to the buffer memory (*Luijten et al. – Column 9, Lines 65-67 and Column 10, Lines 1-28*).

Consider **claims 18 and 39**, as applied to claims 17 and 38 above, Foore et al. as modified by Luijten et al. discloses that when the buffer memory excluding the first transmission window is capable of accommodating the second new data unit, storing the second new data unit into the buffer memory (*Luijten et al. – Column 9, Lines 65-67 and Column 10, Lines 1-28*).

Consider **claims 19 and 40**, as applied to claims 18 and 39 above, Foore et al. as modified by Luijten et al. discloses that if the second transmission window is capable of

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accommodating the second new data unit, storing the second new data unit into the second transmission window (*Luijten et al. – Column 9, Lines 65-67 and Column 10, Lines 1-28*).

Consider **claims 20 and 41**, as applied to claims 14 and 35 above, Foore et al. as modified by Luijten et al. discloses that the first station stops processing the new data unit if the buffer memory is full (*Luijten et al. – Column 9, Lines 65-67 and Column 10, Lines 1-28*).

Consider **claims 21 and 42**, as applied to claims 14 and 35 above, Foore et al. as modified by Luijten et al. discloses keeping data units stored within the buffer memory when the second transmission window is configured (*Page 5, Paragraphs 0051-0052 and 0059*).

2. **Claims 6-13 and 27-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Foore et al. (US Patent Application Publication 2004/0179497)** in view of **Dote (US Patent 6,614,755)**.

Consider **claims 6 and 27**, Foore et al. discloses a method for controlling wireless communication between a first station and a second station, the first station having a buffer memory, a first memory block of the buffer memory being allocated to a first radio bearer for storing data units transmitted from the second station through the first radio bearer (*Figures 1 and 3*), the method comprising the steps of:

establishing a second radio bearer between the first station and the second station (*based upon need, more than one bearer is set up between the first and second station – Page 4, Paragraphs 0042, 0044-0045 and 0048; Page 5, Paragraph 0054*);

allocating a second memory block of the buffer memory to the second radio bearer for storing data units transmitted from the second station through the second radio bearer (*the buffer*



*is reconfigured and the data sent to the respective buffer can be sent over the bearers which are assigned to the buffer – Page 5, Paragraphs 0051-0052 and 0059).*

However, while Foore et al. discloses establishing bearers for communication between stations, they fail to specifically disclose that if a capacity of the second memory block available to the second radio bearer is less than a total capacity of the second memory block allocated to the second radio bearer, driving the first station to output a control message to the second station for adjusting a size of a transmission window of the second station for the second radio bearer, wherein the transmission window delimits a number of protocol data units, called PDUs hereafter, which are allowed to transmit on the second radio bearer.

In related prior art, Dote discloses that if a capacity of the second memory block available to the second radio bearer is less than a total capacity of the second memory block allocated to the second radio bearer, driving the first station to output a control message to the second station for adjusting a size of a transmission window of the second station for the second radio bearer, wherein the transmission window delimits a number of protocol data units, called PDUs hereafter, which are allowed to transmit on the second radio bearer (*Figures 1 and 2 – Abstract; Column 2, Lines 4-24; Column 4, Lines 49-67; Column 5, Lines 1-10 and 19-22*).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Dote with those of Foore et al. in order to provide control over the network and all the network to control congestion efficiently.

Consider **claims 7 and 28**, as applied to claims 6 and 27 above, Foore et al. as modified by Dote discloses keeping data units stored within the buffer memory when the second memory block is allocated (*Page 5, Paragraphs 0051-0052 and 0059*).

Consider **claims 8 and 29**, as applied to claims 6 and 27 above, Foore et al. as modified by Dote discloses that the size of the transmission window of the second station for the second radio bearer is adjusted to be equal to the capacity of the second memory block available to the second radio bearer when the second station receives the control message from the first station (*Dote – Column 2, Lines 4-24; Column 4, Lines 49-67; Column 5, Lines 1-10 and 19-22*).

Consider **claims 9 and 30**, as applied to claims 6 and 27 above, Foore et al. as modified by Dote discloses reducing the first memory block within the buffer memory for allocating the second memory block within the buffer memory (*read as the first station has a limited amount of memory and when the buffer is reconfigured the first memory block, i.e. memory capability, is reduced – Page 5, Paragraphs 0051-0052 and 0059*).

Consider **claims 10 and 31**, as applied to claims 6 and 27 above, Foore et al. as modified by Dote discloses driving the first station to output the control message for increasing the size of the transmission window of the second station for the second radio bearer if the capacity of the second memory block available to the second radio bearer is increased by a predetermined amount of space (*Dote – window size is increased when congestion eases – Column 2, Lines 4-24; Column 4, Lines 49-67; Column 5, Lines 1-10 and 19-22; Column 6, Lines 1-9*).

Consider **claims 11 and 32**, as applied to claims 10 and 31 above, Foore et al. as modified by Dote discloses that if the capacity of the second memory block increased by the predetermined amount of space reaches the total capacity of the second memory block, the first station outputs the control message to adjust the size of the transmission window of the second station for the second radio bearer to be equal to a configured size when the second radio bearer

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is established (*Dote – window size is adjusted according to terminal capability – Column 2, Lines 4-24; Column 4, Lines 49-67; Column 5, Lines 1-10 and 19-22; Column 6, Lines 1-9*).

Consider **claims 12 and 33**, as applied to claims 10 and 31 above, Foore et al. as modified by Dote discloses driving the first station to periodically check if the capacity of the second memory block available to the second radio bearer is increased (*Dote – Column 4, Lines 49-67; Column 5, Lines 1-10 and 19-22; Column 6, Lines 1-9*).

Consider **claims 13 and 34**, as applied to claims 6 and 27 above, Foore et al. as modified by Dote discloses that before the second memory block starts storing data units transmitted from the second station through the second radio bearer, the first station outputs the control message for decreasing the size of the transmission window of the second station for the second radio bearer if the capacity of the second memory block available to the second radio bearer is less than the total capacity of the second memory block allocated to the second radio bearer (*Dote – window size is adjusted according to terminal transmission – Column 2, Lines 4-24; Column 4, Lines 49-67; Column 5, Lines 1-10 and 19-22; Column 6, Lines 1-9*).

***Conclusion***

1. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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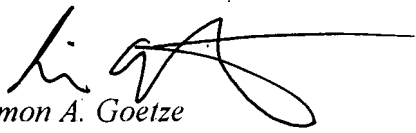
2. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Simon A. Goetze whose telephone number is (571) 270-1113. The Examiner can normally be reached on Monday-Thursday from 7:30am to 5:00pm and Friday from 7:30am to 4:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.



Simon A. Goetze  
S.A.G./sag

September 17, 2007



Rafael Perez-Gutierrez  
Supervisory Patent Examiner  
Technology Center 2600  
Art Unit 2617

9/17/07